

SULFATE BY GRAVIMETRIC METHOD SM 19 th Ed 4500-SO ₄ ²⁻ D					
Facility Name: _____ VELAP ID _____					
Assessor Name: _____ Analyst Name: _____ Inspection Date _____					
Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/ Revision/ Date _____ Analyst: _____					
Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____					
Were heavily polluted samples stored at 4°C?	4500-SO ₄ ²⁻ A 3				
Were sample concentrations of SO ₄ ²⁻ believed to be above 10 mg/L?	4500-SO ₄ ²⁻ A 3				
If silica concentrations in samples were believed to exceed 25 mg/L, were samples subjected to silica removal?	4500-SO ₄ ²⁻ C.4.a				
Was the pH of samples adjusted to 4.5 to 5.0 with HCl prior to analysis?	4500-SO ₄ ²⁻ C.4.b				
Was HCl added to samples, and those samples heated to boiling prior to addition of BaCl ₂ ?	4500-SO ₄ ²⁻ C.4.b				
Was warm BaCl ₂ stirred into boiling samples until precipitation appeared to be complete, and then was BaCl ₂ added to about 2 mL excess?	4500-SO ₄ ²⁻ C.4.b				
Were precipitates digested at 80 to 90°C for not less than 2 hours?	4500-SO ₄ ²⁻ C.4.b				
Did the fritted glass filter have a maximum pore size of 5µm?	4500-SO ₄ ²⁻ D 2.a.1				
Did the membrane filter have a maximum pore size of about 0.45µm?	4500-SO ₄ ²⁻ D 2.a.2				
Was fritted glass filter dried to a constant weight in an oven at 105°C or higher, cooled in a desiccator, and weighed?	4500-SO ₄ ²⁻ D 4.c.1				
Were membrane filters dried to a constant weight in a vacuum oven at 80°C under a vacuum of at least 85kPa or in a conventional oven at 103 to 105°C, cooled in a desiccator, and weighed?	4500-SO ₄ ²⁻ D 4.c.2				
Notes/Comments:					

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Were portions of BaSO ₄ filtered at room temperature?	4500-SO ₄ ²⁻ D 4.d				
Was precipitate washed with portions of warm distilled water until washing were free from Chloride as indicated by AgNO ₃ -HNO ₃ reagent?	4500-SO ₄ ²⁻ D 4.d				
If a membrane filter was used to filter suspension, was a few drops of silicone fluid added to the suspension prior to filtering?	4500-SO ₄ ²⁻ D 4.d				
Were filters and precipitates dried by the same procedure used in preparing the filter?	4500-SO ₄ ²⁻ D 4.d				
Notes/Comments:					